followed by skin necrosis) reported by Penswick and Wright, we suggest that the patient had cholesterol crystal embolisation. The diagnosis could be confirmed by histological findings of cholesterol crystals in the small and medium sized arteries. It may be necessary to take repeated biopsy specimens to find these changes.

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Future of cancer registries

EDITOR,—Allyson Pollock's editorial on the problems that cancer registries face in obtaining good quality data on outcomes points out the potential conflict between datasets based on populations and those based on clinicians.[1] Clinically based datasets focus on patients treated in a given centre and do not provide an accurate picture of the treatment received by the population as a whole. On the other hand, data normally collected by cancer registries cover all cases of cancer but typically include inadequate amounts of the clinical information necessary for valid comparisons of outcomes of treatment.[2,3] The merits of the two sources of data thus need to be combined for a clearer picture of variations in both the delivery and outcome of treatment.

West Midlands Regional Health Authority has just approved substantial funding for a joint programme covering the cancer registry and the proposed cancer centres and units as part of the implementation of the Calman report on cancer services. The system will be based on existing data collection networks in the cancer registry and cancer centres. To improve trial recruitment and monitoring, links will be established between the Cancer Research Campaign's Trials Unit and the cancer registry. Data collected will as far as possible be derived from clinicians by means of computer database systems as part of routine work practices.[4,5] They will be coded at source, through the use of look-up tables, according to the International Classification of Diseases systems used at the cancer registry. Data on radiotherapy and chemotherapy prescribed will be collected directly by means of computer based prescribing systems.

Data on patients treated by clinicians in cancer units not covered by the core computer network will be collected by means of machine readable registration and follow up forms as part of the clinical record. Ideally the data will be transferred to local computerised databases and then downloaded to the cancer registry. Completion of these forms will be a criterion within the region for obtaining and keeping the status of a cancer unit. Clinical information collected will be available to the unit, together with data gathered by the registry from other sources for audit or research purposes.

We believe that the system we are setting up will use the resources at the cancer registry to maximum advantage while at the same time being of value to clinicians auditing their local practice. The system should provide regionwide data on outcomes based on information derived from clinicians.

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Hepatitis B immunisation and reactive arthritis

EDITOR,—Wajahat Hassan and Roger Oldham describe two patients in whom immunisation against hepatitis B was followed by prolonged reactive arthritis.[1] Sexually acquired reactive arthritis is an important form of reactive arthritis; gonococcal infection may also present with arthritis. No details of the sexual histories of the patients are reported, and although the patient in case 1 had symptoms of dysuria, a urethral swab was not taken. There is no report of diagnostic tests for chlamydia, the commonest organism associated with sexually acquired reactive arthritis. Conventional urine cultures will not grow this organism.

Failure to exlude a sexually acquired reactive arthritis casts doubt on the authors' suggestion of an association between vaccination and arthritis. Both patients were health care workers, which might have caused problems for their colleagues in investigating for a sexually transmitted disease. Referral to a genitourinary medicine clinic, because of its confidentiality, should avoid such problems. If the patients' arthritis was related to a sexually transmitted disease the outcome might have been better with appropriate treatment of the infecting organism. This is another reason for referring all such patients to a genitourinary medicine clinic.

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Implicit memory

EDITOR,—Recent work by Hughes *et al* suggests that unconscious processing of auditory information takes place during general anaesthesia,[1] which would fit into the category of "implicit memory" as defined in J G Jones's editorial.[2] This raises the question whether implicit memory is an unavoidable and consistent property of general anaesthesia.

Studies have shown that electroencephalographic patterns during hypnosis and conscious sedation with inhalation agents are characterised by an increase in α (9-12 Hz) activity and suppression of low (0-3 Hz) frequencies.[3,4] We have monitored the electroencephalogram during the complete cycle of induction of anaesthesia, surgery, and recovery, using a transform that eliminates the errors of the fast Fourier spectral analysis method. The characteristic pattern in a patient who is adequately anaesthetised, as judged by accepted methods, is that of complete suppression of the α activity but with a dominant low frequency component in the 1-3 Hz range. We believe that reappearance of α activity may be an important indicator of lightening anaesthesia and that it is this that is associated with the onset of implicit memory. Investigations that showed success of unconscious implicit learning may possibly have been carried out[3] during periods when subjects were only lightly anaesthetised.

We believe that sufficient information on depth of anaesthesia can be derived from the intrinsic electroencephalogram without resort to auditory or visual evoked potentials. Avoidance of such methods has considerable advantages in ear or eye surgery and for patients with impaired hearing or vision. Our transform is being assessed to determine its usefulness in detecting periods of either implicit or explicit awareness during operations.

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Cochrane Collaboration

EDITOR,—I wish to clear up three misconceptions about the Cochrane Collaboration's work which are mentioned in Fiona Godlee's editorial.[1]

Firstly, the claim that the Cochrane Collaboration limits itself to randomised controlled trials is not true. Because so many ineffective and harmful treatments have been introduced on the basis of unreliable observational evidence we will continue to concentrate on randomised controlled trials as the first step in assessing the effects of health care. However, because we select topics for study on the basis of their importance to health, not because they have been subjected to randomised controlled trials, we use non-randomised studies when no randomised ones can be carried out to address the topic.

Secondly, the criticism that the collaboration doesn't wish to expose its processes and products to detailed external scrutiny is contradicted by both deeds and words. Anybody, anywhere, can join the collaboration, and we are delighted that so many of the participants at the second colloquium, most of whom were not members at the collaboration's start, have subsequently joined us. Furthermore, the electronic publication of Cochrane reviews (first as protocols, subsequently as analyses) will provide unprecedented opportunities not only for peer review (which, of course, will also be carried out by the print journals publishing derivations of them) but for continuous updating and rapid modification in the light of criticism.[2] Finally, the peer review process is the focus of one of our newest Cochrane centres.

Thirdly, those who claim that too little emphasis is placed on disseminating the results of Cochrane